

Pred. App. No.: 09/485,760

Pred. Filing Date: February 15, 2000

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-34 (Cancelled).

Claim 35 (New): An isolated polynucleotide encoding *Neisseria meningitidis* LbpB selected from the group consisting of:

- SEQ ID NO: 1 (from nucleotide 100 to nucleotide 2274), or a polynucleotide having 80% identity thereto;
- SEQ ID NO:3, or a polynucleotide having 80% identity thereto;
- SEQ ID NO:5, or a polynucleotide having 80% identity thereto;
- SEQ ID NO:7, or a polynucleotide having 80% identity thereto; and
- SEQ ID NO:9, or a polynucleotide having 80% identity thereto.

Claim 36 (New): The polynucleotide of claim 35 comprising a recombinant expression system, wherein said expression system is capable of producing a LbpB polypeptide in a compatible host cell.

Claim 37 (New): A host cell comprising the expression system of claim 36.

Claim 38 (New): A process for producing a LbpB polypeptide comprising culturing the host of claim 37 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture.

Claim 39 (New): A process for producing a cell which produces a LbpB polypeptide thereof comprising transforming or transfecting a host cell with the expression system of claim 36 such that the host cell, under appropriate culture conditions, produces a LbpB polypeptide.

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Claim 40 (New): An isolated LbpB polypeptide selected from the group consisting of:

SEQ ID NO: 2, or a polypeptide having 80% identity over its entire length;
SEQ ID NO:4, or a polypeptide having 80% identity over its entire length;
SEQ ID NO:6, or a polypeptide having 80% identity over its entire length;
SEQ ID NO:8, or a polypeptide having 80% identity over its entire length; and
SEQ ID NO:10, or a polypeptide having 80% identity over its entire length.

Claim 41 (New): The polypeptide of claim 40 which comprises the amino acid sequence of SEQ ID NO:2, 4, 6, 8, or 10, respectively, from amino acid position 19 to the C-terminus of the polypeptide.

Claim 42 (New): A fragment of the polypeptide of claim 40, wherein the fragment retains an antigenic activity of the polypeptide, with the proviso that the fragments represented by amino acid position 650-725 of SEQ ID NO:2 and 559-741 of SEQ ID NO:6 are not included.

Claim 43 (New): An antibody immunospecific for the LbpB polypeptide of claim 40.

Claim 44 (New): A method for identifying compounds which inhibit the LbpB polypeptide of claim 40 which comprises:

- (a) contacting a candidate compound with cells which express the LbpB polypeptide; and
- (b) observing the binding, or inhibition of a functional response; or comparing the ability of the cells which were contacted with the candidate compounds with the same cells which were not contacted for LbpB polypeptide activity.

Claim 45 (New): A vaccine comprising an effective amount of the polypeptide of claim 40 and a pharmaceutically acceptable carrier.

Claim 46 (New): A vaccine comprising an effective amount of a protein comprising a fragment of the polypeptide of claim 42 and a pharmaceutically acceptable carrier, wherein the fragment retains an antigenic activity of the polypeptide.

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Claim 47 (New): The vaccine according to claim 45 wherein said composition comprises at least one other *N. meningitidis* antigen.

Claim 48 (New): The vaccine according to claim 46 wherein said composition comprises at least one other *N. meningitidis* antigen.

Claim 49. (New): A method for vaccinating a human against neisserial disease comprising administering to said human a composition comprising an effective amount of the polypeptide, fragment or protein of claim 40.

Claim 50 (New): A method for vaccinating a human against neisserial disease comprising administering to said human a composition comprising an effective amount of the polynucleotide of claim 35.

Claim 51 (New): A method for diagnosing neisserial disease in a human comprising the steps of incubating an antibody produced by administering to a suitable human or animal the polypeptide of claim 40 with a sample of biological fluids from a human to be diagnosed, wherein in the presence of neisserial bacteria an antigen-antibody complex is formed, and subsequently analysing said fluid sample for the presence of said complex.

Claim 52 (New): A therapeutic composition useful in treating humans with neisserial disease comprising at least one antibody directed against the polypeptide of claim 40 and a suitable pharmaceutical carrier.

Claim 53 (New): A kit for diagnosing infection with neisserial bacteria in a human comprising a polynucleotide of claim 35.

Claim 54 (New): A kit for diagnosing infection with neisserial bacteria in a human comprising a polypeptide, fragment or protein of claim 40.

Claim 55 (New): A kit for diagnosing infection with neisserial bacteria in a human comprising an antibody of claim 43.